

DEPARTMENT OF FACILITY MAINTENANCE

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POWERS, DUTIES, AND FUNCTIONS

The Department of Facility Maintenance administers the City's repair and maintenance programs for roads, bridges, streams, flood control systems, traffic signs and markings, City buildings and office facilities, and City vehicles and heavy equipment excluding certain vehicles and equipment belonging to the Police and Fire Departments and the Board of Water Supply. It also administers the repair and maintenance programs for mechanical, electrical, and electronic equipment and facilities for parks, streetlights, and communication centers. The department also provides property management, parking garage management, security, and interdepartment mail services. Additionally, the Department provides heavy vehicle and heavy equipment training support to City agencies.

ORGANIZATION

The department is organized into three divisions, Automotive Equipment Services, Public Building and Electrical Maintenance, and Road Maintenance. The Office of the Director and Chief Engineer provides management and administrative direction and oversight.

Direction is provided in personnel management, budget planning and execution, program coordination, heavy vehicle and equipment operator training and safety, interdepartment mail services, and other matters of general administration. The Construction and Maintenance Fiscal Section of the Department of Budget and Fiscal Services provides fiscal management support. The Department of Information Technology provides computer system support.

HIGHLIGHTS

The Department resurfaced 30 lane miles of roadways utilizing 9,811 tons of asphalt and provided extensive first aid type repairs (13,785 tons of asphalt concrete) to numerous roadways island-wide. The Department also implemented an automated fuel tracking system at Kapaa's Repair Facility and is currently testing its feasibility. Future plans include islandwide automated fuel tracking systems for all fueling stations. Other activities included establishment of an inspection and inventory program of street light electrical cabinets and transformers, installation and replacement of cables for city agencies, and continuation of a preventive maintenance program to replace corroded equipment on street lighting systems throughout the island.

DIVISION OF AUTOMOTIVE EQUIPMENT SERVICES

DUTIES AND FUNCTIONS

The Division of Automotive Equipment Service (AES) is responsible for planning, directing, coordinating, and administering all programs, activities, and affairs associated with the maintenance and repair of the automotive, heavy vehicle, and construction equipment fleets of most City and County departments and agencies (with the exception of the Honolulu Fire Department, Hono-



Iulu Police Department, and the Board of Water Supply). The division has the following vehicles/equipment under its jurisdiction: 1,765 on-road/highway vehicles, 127 offroad/non-highway equipment, and 454 miscellaneous equipment (e.g., trailers, fork-lifts, compressors, generators, etc.); for a total of 2,346 pieces.

ORGANIZATION

The division is organized into four functional units: Administration, Storekeeping, Service & Lubrication, and Repair & Maintenance. At full strength, AES staffing is at 142 full-time positions; staffing is currently at 105.

The Administration activity includes the Quality Control & Inspection Branch. This branch is responsible for all preventive maintenance

Exterior view of the Heavy Construction Equipment repair shop at Halawa and inspection scheduling, production control, work order data processing and review, quality assurance, disposal of replaced vehicles/equipment, and is the primary custodian of the City's computerized fleet management system.

Storekeeping is responsible for the acquisition, storage, issuance, and disposal of tools, equipment, replacement parts, accessories, general supplies, and solicitation of private contract equipment and vehicle repair services for the entire division. It is also responsible for processing the division's purchase orders and purchase requisitions (subject to final action by the Budget and Fiscal Services Department).

The Service & Lubrication activity provides fueling, tire repair/replacement and maintenance, lubrication, and cleaning of all equipment supported by this division. Rural fueling stations are also located throughout Oahu at City and County Corporation Yards operated by the Division of Road Maintenance. Board of Water Supply (BWS) and some State and Federal agencies purchase fuel from AES stations when fuel is not available at their own locations.

The Repair & Maintenance unit is the division's major operational activity. The Repair and Maintenance sections include: the Halawa Automotive Repair Shop, Construction Equipment Repair Shop, Welding Shop, Body and Fender Shop, Pearl City Automotive Repair Shop, Kapaa Automotive Repair Shops and the newly created Light Equipment Repair Shop.

ACTIVITY HIGHLIGHTS

Work began in February 2005 on a fueling facility located on Umi Street in Kalihi. This facility will provide diesel fuel, unleaded gasoline, and propane. It is also equipped with an electric vehicle rapid charging station.

An automated fueling tracking system was implemented in June 2005 at the Kapaa Repair Facility and will be tested to



View of Vehicle Wash Rack Facility at Halawa



Fueling Facility at Umi Street

determine its feasibility. Several vehicles assigned to the Windward District were equipped with a receiving collar on the fuel tank filler neck of the vehicle. This collar mates with a collar attached to the dispenser nozzle. When a vehicle comes in for fuel, information from the vehicle is transferred to the mating collar on the nozzle. This information is then transferred to a digital recorder. Validation of the vehicle's information such as the identification number, mileage and or engine hours is captured prior to automatic activation of the dispenser. Future plans call for all City & County of Honolulu vehicles and fueling stations to be equipped with an automated system.

ACTIVITY SUMMARY

STOREKEEPING:

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NUMBER OF STOCK PARTS TRANSACTIONS
NUMBER OF NON-STOCK PARTS TRANSACTIONS 64,053
NUMBER OF FUEL (RECEIVED) TRANSACTIONS 846
NUMBER OF PARTS/SERVICES CHARGED TO
COMMERCIAL TRANSACTIONS2,345
SERVICE & LUBRICATION:
LUBRICATION (VEHICLE UNITS)854
TIRE REPAIR AND REPLACEMENT2,273
REPAIR & MAINTENANCE (REPAIR ORDERS PROCESSED):
HALAWA YARD AUTOMOTIVE REPAIR & MAINTENANCE
CONSTRUCTION EQUIPMENT REPAIR & MAINTENANCE934
LEEWARD YARD (PEARL CITY) REPAIR & MAINTENANCE
WINDWARD YARD (KAPAA) REPAIR & MAINTENANCE
WELDING SHOP 555
BODY FENDER & REPAIR912

PUBLIC BUILDING AND ELECTRICAL MAINTENANCE DIVISION

DUTIES AND FUNCTIONS

The Public Building and Electrical Division plans, directs, coordinates and administers the repair, maintenance and renovation programs for all public buildings and appurtenant structures; street, park, mall, outdoor and other city lighting and electrical facilities; and communication facilities on the Island of Oahu that are under the jurisdiction of the Department of Facility Maintenance. Daily custodial and utility services are provided for a number of these facilities with a combination of in-house staff and private contractors. The division also administers activities including property management, parking garage management, municipal parking lot management, city employees' parking, motor pool and security for Honolulu Hale, Honolulu Municipal Building and other city facilities.

ORGANIZATION

The division is made up of four branches: Repair and Maintenance (R&M), Traffic Electrical Maintenance Services (TEMS), Custodial and Utility Services (CUS), and Parking and Property Management (PPM).

The Repair and Maintenance Branch is made up of eight sections: Air Conditioning, Carpentry, Electrical, Masonry, Painting, Plumbing, Mechanical Repair, and Building Maintenance Repair. This branch provides skilled trades and support personnel to repair, maintain, and perform renovation work on all public buildings under the

jurisdiction of the Department of Facility Maintenance. This branch also operates a cabinet making shop for the construction of custom designed furniture.

The Traffic Electrical Maintenance Services Branch is made up of four sections: Electrical Maintenance Services, Electronic Maintenance Services, Central Warehousing, and Shop Operations. This branch performs construction, installation and maintenance work for street, park, mall, indoor and outdoor lighting, and other city lighting, electrical, and communication facilities. This branch also operates a central warehouse and electrical shop. A night crew is maintained to answer all related trouble calls.

The Custodial and Utility Services Branch is made up of five sections: Honolulu Hale, Honolulu Municipal Building, Honolulu Police Department Headquarters, Carpet Cleaning, and Utility Services. This branch provides custodial and utility services for all city owned and leased facilities.

The Parking and Property Management Branch is made up of three sections: Parking Operations, Property Management, and Security. This branch administers management contracts for parking garages and city properties, provides employee parking, manages municipal parking lots, operates a motor pool, and provides security services for the Civic Center Complex and other city facilities.

Accomplishments

The Repair and Maintenance Branch completed 6,178 work orders to accomplish its preventive maintenance program, and repair and maintenance projects.

Our staff completed the following major projects:

- 1. Honolulu Municipal Building (HMB) Performed lighting re-arrangements on various floors for departments that relocated to HMB.
- 2. Department of Information Technology Replaced existing Type 9 data cables with new Cat 5 cables for various departments.

No repair and maintenance contract projects were completed during the fiscal year due to budget constraints.

The Traffic Electrical Maintenance Services Branch accomplished the following:

- 1. Maintained 45,937 street lights by replacing 13,380 defective or burned out lamps, installed 2,006 new luminaries, and replaced 4,580 defective photocells. Also responded to 218 emergency calls, completed 160 joint-pole changeovers, and logged in 32,218 miles in the performance of night duties.
- 2. Completed 13,053 man-hours of maintenance work for the indoor and outdoor lighting at various parks and recreation centers for the Department of Parks and Recreation, and at various Botanical Gardens, and the Honolulu Zoo, and Hanauma Bay for the Department of Enterprise Services. Completed 2,557 work requests.
- 3. Tested and maintained 160 civil defense sirens. Maintained Police and Fire Departments' antennas.
- 4. Installed 405 special event banners on streetlight poles in the Downtown and Waikiki areas for the Aloha Week Festivities, Honolulu Festival, and Matsuuri Festival. Banners were also installed for special Hawaii Convention Center events such as the National Association of Letter Carriers, Society of International Urology, and the Japanese American Citizens League.
- Assisted Oahu Civil Defense in the maintenance and repair of the electronic equipment for the rain gauge at the Kawainui Marsh and Maunawili Stream.
- 6. Maintained a purchasing, receiving, storing, and issuing system for various supplies, tools and equipment.
- 7. Started an inspection and inventory program of street light electrical cabinets and transformers.

- 8. Replace corroded street light transformers in Makakilo, Waipio Gentry, and Mililani.
- 9. Continued with the preventive maintenance program to replace corroded parts and equipment on underground-electrical street lighting systems in Hawaii Kai, Waipio Gentry, Temple Valley, Pearl Ridge, and Halawa.
- Replaced rotten wood poles and upgraded the brittle wiring of the over-head electrical street light system on Waialua Beach Road.
- 11. Provided electrical power for stage sound systems and booths at Sunset on the Beach, Brunch on the Beach, Palolo Pride Day, and other special events.
- 12. Replaced corroded ballfield luminaires at Wahiawa District Park. Performed preventative maintenance on the crossarms for the luminaires.
- 13. Performed an energy-efficiency lighting retrofit, replacing existing five-hundred sixty eight (568) T12 fluorescent lamps and two-hundred sixty nine (269) magnetic ballasts, with T8 fluorescent lamps and electronic ballasts at the Koko Head District Park multi-purpose building and gymnasium.
- 14. Installed fiber-optic cable from S. King Street to the Medical Examiner's Office as requested by the Department of Information and Technology.

The Custodial and Utility Services Branch provided custodial and grounds keeping services for the rural police stations, Fire Training Center, Waianae Neighborhood Community Center, Repair and Maintenance Facility, Hauula Civic Center, Kapahulu Motor Vehicle Inspection, Soil and Material Testing Lab, Waipahu Fire Maintenance and Storeroom Facility, Medical Examiner Facility, Iwilei Health Services Facility, and Police Training Facility. Custodial services were provided for Honolulu Hale and its Annexes, Honolulu Municipal Building, Honolulu Police Headquarters, Airport Industrial Center, Walter Murray Gibson Building, Government Office Building, Chinatown Police Station, Kapolei Police Station, Kapolei Hale, City Square Driver License Facility, and Motor Vehicle and Licensing Division at Chinatown Gateway Plaza.

The Parking and Property Management Branch provided employee parking, motor pool services, and security services for the Civic Center Complex, Manana Warehouse Complex, and other city facilities. This branch administered and managed seven parking management contracts for public garages located in Chinatown Gateway Plaza, Marin Tower, Kekaulike Courtyards, Hale Pauahi, Kukui Plaza, Smith Beretania, and Harbor Tower. It also managed two parking meter operated garages located in Harbor Village and Lani Huli Elderly and thirteen municipal surface parking lots located throughout the Island of Oahu. The Branch also administered and managed property management contracts for residential and commercial properties located at Chinatown Gateway Plaza, Chinatown Manor, Ewa Villages, Foster Gardens, Harbor Village, Kanoa Apartments, Kulana Nani Apartments, Manoa Gardens, Marin Tower, Pauahi Hale, Westlake Apartments, Westloch Elderly, and Winston Hale.

DIVISION OF ROAD MAINTENANCE

DUTIES AND FUNCTIONS

The Division of Road Maintenance is primarily responsible for the maintenance of all streets and municipal parking lots under the jurisdiction of the City and County of Honolulu. It also renders pavement maintenance to private roadways open to public use. In addition, it has the major responsibility of maintaining the many city-owned streams, channels, ditches and other flood control and storm drainage systems located throughout the Island of Oahu, as well as enforcing the maintenance of privately owned streams.

The division also performs household bulky item collection, dead animal pickup services, and provides assistance to the Department of Environmental Services Division of Refuse Collection and Disposal in supervision of some of their rural area refuse collection operations.

Emergency work generated by heavy rains, wind, tsunamis, earthquakes and other natural disasters are another responsibility of this division. Also, because of its resources and capability to perform varied types of work, it is often called upon to assist other city agencies and departments in special situations and emergencies.

ORGANIZATION AND EXPENDITURES

The division carries out its duties with staff and personnel operating out of ten corporation baseyards. Three baseyards (Halawa, Sand Island and College Walk) service the Honolulu district. Rural baseyards are based in the districts of Kailua, Kaneohe, Pearl City, Laie, Waialua, Wahiawa, and Waianae.

The Halawa baseyard is organized functionally into eight major sections as follows: Roadside, Storm Drain and Stream Cleaning; Street Sweeping (Sand Island); Clean Team (College Walk); Masonry and Carpentry; Road Pavement Maintenance and Repairs; Signs and Markings; and Equipment Pool. Crews from the latter four sections also provide support to the rural areas.

The College Walk, Kailua, Kaneohe, Pearl City, Laie, Waialua, Wahiawa, and Waianae baseyards are organized generally to retain operational flexibility in providing the many types of services required at various demand levels.

Activity Highlights

1. Resurfaced 30 lane miles of roadways utilizing 9,811 tons of asphalt.

- 2. Provided extensive first aid type repairs to numerous roadways island-wide by placing a thin asphalt overlay on deteriorated pavements areas to minimize further deterioration and provide a better riding surface until contract resurfacing funds become available. As a result of this work, the asphalt concrete tonnage for first aid type repairs in FY 2005 increased to 13,785 tons.
- 3. Continued the program to contract cleaning and maintenance services for miscellaneous vacant/remnant City lots and sidewalk areas by awarding five contracts to maintain 137 locations.
- 4. In conjunction with the State Department of Transportation, continued the Division's Pothole Hotline Program. This fiscal year, 5,777 calls were received on a 24-hour hotline; 4,585 requests were for pothole patching and pavement repairs and the rest for other work. A total of 48,186 potholes were patched at locations identified through the Pothole Hotline and other means.
- 5. As part of the Mayor's Clean Stream Program, continued the Adopt-A Stream Program. Volunteer groups have officially adopted and cleaned streams.
- 6. Approximate totals of 8,294 catch basins, inlets, and manholes and 278,650 lineal feet of storm drain lines were inspected and cleaned.
- 7. Continued program to inspect all 298 streams and drainage ditches in the inventory and clean them as necessary; 130 streams and/or ditches were cleaned, many more than once.

Accomplishments

Street Maintenance

112 lane miles of roadway were resurfaced by contract in the Honolulu, Pearl City, Waianae, Kailua and Kaneohe Districts.

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	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
STREET RESURFACING	11,114	0	0	0	0	9,811
FIRST AID	11,295	4,034	2,387	1,829	9,354	3,785
POTHOLE PATCHING	1,133	905	1,077	1,060	2,058	1,592
TRENCH PATCHING	0	0	0	0	0	0
TOTAL	23,542	4,939	3,464	2,889	11,412	25,188

In addition, 919 bags/buckets of proprietary roadway patching material were used primarily to patch potholes.

Stream Cleaning

Streams and ditches cleared or dredged during the year included the following:

HONOLULU

16th Avenue Boulder Basin	Mona Ditch
Ahuwale Ditch	Muliwai Ditch
Ailuna Ditch	Narcissus Ditch
Ala Aolani Ditch	Niu Boulder Basin (East & West)
Hahaione Boulder Basin (East)	Niu Stream
Hahaione Ditch	Nuhelewai Stream
Hahaione Stream	Nuuanu Stream
Hao Ditch	Opihi Ditch

Hausten Ditch Pacific Heights Place Ditch Hema Ditch Palolo Stream HICC Ditch Paniolo Ditch Hiyane's Ditch Pauoa Stream Kalanianaole Ditch Poipu Ditch Kalili Stream Ditch Poola Ditch Portlock Ditch Kapalama Canal Kolomona Ditch Puunanea Ditch Kuakini Ditch Ruth Place Ditch Kuikele Ditch Salt Lake Intake Kuliouou Boulder Catch Umalu Ditch Kuliouou Stream Waialae Nui Stream

Kuliouou Stream Waialae Nui Stream
Likini Ditch Wailupe Boulder Basin

Luinakoa DitchWailupe StreamMakiki DitchWainiha Street DitchManaiki StreamWaolani Street DitchManoa StreamWawamalu StreamMoanalua Boulder BasinWood Ditch

Moanalua Stream

PEARL CITY

Ewa Lined DitchPearl City StreamHalawa DitchPearl Harbor Bike Path SwaleKlokole DitchWaikele Drainage DitchNoelani DitchWaipio Gentry Ditch

Palailai Ditch

KAILUA

Aikahi STP Ditch

Alahaki Ditches

Kawainui Dike

Kaelepulu Stream Mouth

Kahawai Stream

Waimanalo Stream

KANEOHE

Aina Moi Ditch

Anolani Stream

Anolani Stream

Kionaole Ditch

Kokokahi Ditch

Bayside Place Ditch

Kuneki Ditches (3)

Ben Parker Ditch

Liula Ditch

Fong's Ditch

Haiku Ditch

McDougal Ditch

Haleoke Ditch Malulani Drainage Ditch

Halemanu Street Basins Mattson Ditch
Hui Kelu Street Slope Easement Nohonani Ditch
Hui Uliuli Channel Pilina Ditch

Kahaluu Flood Control (KA-1 & KA-2)

Ruahuula Place Ditch

Raimalu Ditch

Puohala Ditch

Kam Highway Ditch Puuohalai Place Ditch
Kaneohe Dam Temple Valley Lined Ditch

Kaneohe Flood Control Waihee Stream
Kaneohe Industrial Ditch Wailehua Ditch Mouth
Kaneohe Stream Yatch Club Ditches (2)

Kawa Stream Yacht Club Terrace Ditches (2)

WAIANAE

Alamihi Ditch

Maili (Maipalaoa) Channel

Nanakuli Lined Ditch

Pokai Bay Ditches

Ulehawa U-1 Channel

Ulehawa U-2 Channel

Ulehawa U-3 Channel

LAIE

Hanaimoa Ditch Kahawainui Stream Flood Control

Hauula Homestead Road Ditch Kawaipapa Stream

Hoalua Ditch Ke Iki Ditch

WAHIAWA

Waipio Lined Ditch Whitmore Open Ditch

Waipio Stream

Masonry and Carpentry

Heavy construction masonry and carpentry crews based in Honolulu do all masonry and carpentry work in Honolulu and assist the rural districts as needed. Two smaller masonry crews operating out of the Pearl City and Kailua baseyards do routine jobs, mainly sidewalk repairs for the Leeward and Windward Districts, respectively. A summary of work done includes the following:

- 1. Installed 90 feet of drain lines of various sizes.
- 2. Repaired or reconstructed 6,232 square feet of Reinforced Concrete, Concrete Masonry Unit (CMU) and Concrete Rubble Masonry (CRM) walls.
- 3. Repaired or installed 1201 feet of guardrails (metal/wood) and 3,447 feet of chain link fences.
- 4. Reset, reconstructed and/or repaired 4,644 feet of broken, uneven, settled, curbs and/or gutters.
- 5. Reconstructed 210 catch basin deckings.
- 6. Reconstructed 65,002 square feet of sidewalk by in-house crews island-wide.
- 7. Reconstructed 2214 square feet of concrete roadway pavement.

Street Sweeping

The following table shows the number of curb miles swept mechanically during the fiscal year.

CURB MILES SWEPT MECHANICALLY

FISCAL YEAR	<u>HONOLULU</u>	RURAL	<u>TOTAL</u>
2000	36,030	4,711	40,741
2001	36,500	4,500	41,000
2002	36,743	6,161	42,904
2003	35,324	4,860	40,184
2004	32,138	4,869	37,007
2005	30,115	5,259	35,374

During the year, crews in Honolulu and rural yards serviced 1,426 litter containers at bus stops, malls, and other locations throughout the island, at various frequencies. Containers were distributed throughout the island as follows:

Honolulu - 930 Wahiawa - 68
Pearl City- 178 Waianae - 34
Kaneohe - 84 Waialua - 25
Kailua - 66 Laie - 41

Signs and Markings

The Signs and Markings crews based in Honolulu do the installation and maintenance of traffic signs and markings in Honolulu and assist the rural districts as needed. A summary of work done includes:

- 1. Painted 4,498 lineal feet of curbs
- 2. Striped 669 miles of traffic lines
- 3. Striped 1215 crosswalks
- 4. Installed 6,353 pavement markers
- 5. Manufactured 6,343 traffic signs
- 6. Installed/reset/replaced 4,667 traffic signs and 1,293 posts.

AID TO OTHER AGENCIES

Department of Design and Construction

1. Assisted in the preparation of construction documents for street rehabilitation and sidewalk reconstruction projects.

Department of Environmental Services

- 1. Assisted the Storm Water Quality Branch in investigating illegal discharges into the storm drainage system.
- 2. Provided relief personnel for absent Refuse Collectors at Laie, Wahiawa, and Waialua baseyards.
- 3. Provided bulky item pickup service in all rural districts with two special crews working out of the Pearl City Yard supplemented as needed by individual baseyard crews.
- 4. Provided dead animal pickup service in all rural districts.
- 5. Assisted in road repairs as requested at various sewer line breaks.

Department of Transportation Services

- 1. Installed/revised traffic signs and markings to improve traffic control.
- 2. Maintained bikeway facilities.
- 3. Swept parking areas and serviced litter containers at the Hawaii Kai, Wahiawa, Kunia, Mililani, Kapolei and Waialua Parkand-Ride Facilities.

Board of Water Supply

1. Assisted in road repairs as requested at various waterline breaks.

Department of Planning and Permitting

 Cleaned sidewalk areas and repaired sidewalks and driveways per citations and work orders.

Department of Parks and Recreation

- In conjunction with the "Clean Team" reorganization, continued maintenance responsibilities for Chinatown/Downtown malls (Fort Street, Kekaulike Street, River Street, Kalikimaka, Kila and College Walk) and parks (Wilcox, Chinatown Gateway, Kamalii, Smith-Beretania, and Aala).
- 2. Assisted in emergency removal of damaged street tree branches during and following storm events.
- 3. Assisted in the hauling of Parks and Recreation heavy equipment.

Others

- 1. Support Honolulu City Lights, Brunch on the Beach, Sunset on the Beach and Rediscover Oahu activities.
- 2. Moved and set up equipment for special events at Honolulu Hale, Kapolei Hale, Honolulu Municipal Building, West Oahu Regional Park, Waipio Soccer Complex, Hanauma Bay Visitor Center, and Kapiolani Bandstand; also for various locations as part of the Sustainability Conferences.
- 3. Provided cleanup services and/or signing and traffic control services for various events, such as, the Hooleaulea Downtown/ Waikiki), Aloha Week Parade, Tree Lighting Ceremony, and the Kamehameha Day Parade.
- 4. Provide litter pickup services for community and stream cleanups.
- 5. Distributed supplies for community cleanups and storm drain stenciling projects.
- 6. Cleared and maintained vacant lots in Ewa Villages.
- 7. Cleared illegal dumpsites at various locations in the community and transported material for disposal/recycling.
- 8. Cleared landslides of State owned properties and other properties onto City roads and drainage facilities following storm events.
- 9. Cleared sand, coral and rocks from State portions of Kamehameha Highway following high surf events.